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CIA 203 (PRO)
SOCY.01.2 TOWARDS
~~PAPERLESS INFORMATION~~
SYSTEMS

The medium is the mirage

Towards paperless information systems, by F. W. Lancaster (Academic Press, pp 179, £8.75), is a curate's egg of a book. It belongs to Academic's Library and Information Science series, and appears to be intended for students; much of it will seem elementary to those working in information science. But other parts are controversial and apparently aimed at the fully trained, who are capable of making critical judgements on the author's arguments.

Chapters 1, 2, 4 and 5 give a balanced but unoriginal review of the development of scientific communication from the pre-computer era to date. I make only two criticisms of this part. First, Lancaster gives too little attention to the strong argument that a relatively small core of journals provides most of what scientists need to read. Secondly, he believes that exponential growth of the literature continues—evidence is that growth has slowed since the 1973 energy crisis.

Chapter 3 describes a paperless information system being installed at the US Central Intelligence Agency. This is described in a bland PRO style, which gave me some wry

amusement since I read it at the time when President Carter's criticisms of the CIA's performance were in the headlines. This is material not normally found in books on information retrieval, and was new to me. However, because the CIA suffers little financial stringency, deals with ephemeral information, and can instruct its staff to use a given system, I believe that its experience is irrelevant to scientific communication.

The electronic information system that Lancaster believes "inevitable" in the future is outlined by him in Chapters 6 to 10. "Inevitable" implies a mechanistic determinism that is not appropriate in science; surely scientists are free to decide whether they wish to follow this course or not? Some scientists, however, agree with

Lancaster; a physicist recently told me that it is pointless for scientists to discuss what information systems they want, because IBM has already decided what they are to have. Lancaster gives an instructive, though not objective, account of the kind of thing IBM presumably has in mind. Like most such accounts, it is North American-centred; there is little recognition that other countries have different problems, experience or opinions. It plays down several significant obstacles to the achievement of its dream—notably, the inadequacy of visual display units, recently discussed by A. Cawkell (*Wireless World*, vol 84, pp 38 and 69), the naive state of on-line information retrieval software, discussed by A. Kent (*The Information Scientists*, vol 12, p 3), and, most important of all, the conservatism of scientists about their literature.

The author goes into considerable detail on projected costs, but these forecasts bear little resemblance to the high costs incurred by anyone setting up an on-line information system in 1978. For example, simply putting a large data base into disc store initially can take months of computer time. The forecast costs may be right, and in 20 years time computing may cost next to nothing. But is that in IBM's plans? Fytton Rowland